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IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office
CEDAR RAPIDS, IOWA

July 2, 1979
LDR-79-88

Mr. James G. Keppler, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Ill. 60137

50-331

Dear Mr. Keppler:

This letter is supplemental to our partial response to I.E. Bulletin No. 79-07. The partial response letter was dated April 24, 1979. Attached you will find a revision to Enclosure 1 of our April 24, 1979 submittal. The submittal of this supplement is considered to complete our response to I.E. Bulletin No. 79-07.

Very truly yours,

Larry D. Root

Larry D. Root
Assistant Vice President

LDR/RFS/glm

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NSSS Supplier Response

Based on written information from our subvendor who performed the work, none of the methods specified in Item 1 were employed or used in computer codes for the seismic piping. Therefore no response should be required for Item 2.

The seismic analysis of the General Electric supplied Main Steam and Recirculation System piping was performed by Nuclear Services Corporation (NSC). The NUPIPE computer program was used by NSC for the seismic piping analysis.

The computer code ADLPIPE was used to verify NUPIPE for single direction earthquake responses. The intra-modal verification was accomplished using NUPIPE unidirectional excitation combined by hand for comparison with NUPIPE multidirectional results.

Documented verification of early versions of NUPIPE is contained in Nuclear Services Corporation report NSC-7301 (June 1973) "NUPIPE Computer Program Verification" and the November 1973 Addenda.

The contents of this document with respect to dynamic analysis are the following:

1. A NUPIPE versus ADLPIPE comparison of frequencies, forces, moments, displacements, rotations and stress for X earthquake and Y earthquake excitation as separate load cases (thus, intramodal codirectional comparison was not examined in this example).
2. Force time history analysis comparison of NUPIPE with the published solution in the ASME "Pressure Vessel and Piping: 1972 Computer Programs Verification" (ASME Benchmark Problem No. 5).
3. A sample problem in which individual modal responses for X, Y, Z, X+Y, Y+Z and X+Y+Z were calculated by NUPIPE and by hand (using the individual X, Y, Z results) to check both intra-modal combination and inter-modal combination with close modes.

No response is required for Item 4.